

**NEC**

**VERSA E3100**

***Disassembly Manual***



**NEC**

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## Overview

This document contains step-by-steps disassembly instructions for VERSA E3100 notebook. The instructions explained how to remove or disassemble a particular part with the help of photos. The size of the screws in used is display on the right side of the guide.

NEC reserves the right to make any changes to this disassembly guide without notice.

## Technician Notes

Only technician/engineer authorized by NEC Computer Asia Pacific should attempt to repair this equipment. All troubleshooting and repair procedures are display to allow subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard. Any indication of component replacement or printed wiring board modifications may void any warranty or exchange allowances.

## Disassembly Instructions

When disassembling the system, follow these general rules:

- Do not disassemble the system into part smaller than illustrated by this manual.
- Label all removed connectors. Note where the connector goes and what position it originally installed.
- Disconnect the system from the power adaptor.

## Reassembly Instructions

Reassembly is the reverse of the disassembly process. Correct size and type of screw need to reinstall back. Check that no tools or any loose parts left inside the chassis. Check that everything properly installed and all screw tightened.

## Required Tools

All disassembly procedures can be perform using the following tools:

- PH 0x60 Philips screwdriver
- PH 0x40 Philips screwdriver
- SW5.0 Spacer screwdriver
- Flat screwdriver
- Small tweezers
- Pin

## Hazardous Voltage

There is hazardous voltage present inside the computer when it is connect to an AC supply, even when the computer's power switch is off. Exposure to hazardous voltage could cause personal injury. To avoid risk of injury, contact an Authorized Service Provider for proper (UN)installation of optional hardware devices.

## Avoid Electrostatic Discharge

Electrostatic electricity can easily damage circuit cards and integrated circuits (ICs). To reduce risk of damage, store them in protective packaging whenever not installed in your system.

Add-in cards can be extremely sensitive to ESD and always require careful handling. After removing the card from the computer, place the card flat on a grounded, static-free surface, component-side up. Use a conductive foam pad if available, but not the card wrapper. Do not slide the card over any surface.

Before you install or remove memory modules, video memory, disk drives, circuit cards or other devices, protect them from static electricity. To do so, make sure your computer's power switch is OFF. Then, unplug the computer's AC power cord. Before picking up the device you (un)install, you should wear an anti-static wrist wrap (available at electronic supply stores). Be sure to connect the wrist wrap to an unpainted metal portion of the computer chassis. As an alternative, you can dissipate electrostatic build-up by touching an unpainted metal portion of the computer chassis with one hand. Then touch the device you are (un)installing with the other hand, and maintain continuous contact with it until it is (un)installed in the computer.

## Power Supply Unit

Under no circumstances should you attempt to disassemble the power supply. The power supply contains no user-serviceable parts. Inside the power supply are hazardous voltages that can cause serious personal injury. Always return a defective power supply to your dealer.

### WARNING

Ensure that the computer disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is remove. Do not operate the computer with the cover is removed.

### AVERTISSEMENT

Assurez-vous que le système est débranché de son alimentation ainsi que de toutes les liaisons de télécommunication, des réseaux, et des lignes de modem avant d'enlever le capot. Ne pas utiliser le système quand le capot est enlevé.

### WARNUNG

Das System darf weder an eine Stromquelle angeschlossen sein noch eine Verbindung mit einer Telekommunikationseinrichtung, einem Netzwerk oder einer Modem-Leitung haben, wenn die Gehäuseabdeckung entfernt wird. Nehmen Sie das System nicht ohne die Abdeckung in Betrieb.

### ADVERTENCIA

Asegúrese de que cada vez que se quite la cubierta del chasis, el sistema haya sido desconectado de la red de alimentación y de todos los enlaces de telecomunicaciones, de red y de líneas de módem. No ponga en funcionamiento el sistema mientras la cubierta esté quitada.

### WAARSCHUWING

Zorg er voor dat alle verbindingen van en naar de computer (stroom, modem netwerk, etc) verbroken worden voordat de behuizing geopend wordt. Zet de computer nooit aan als de behuizing geopend is.

### AVVERTENZA

Prima di rimuovere il coperchio del telaio, assicurarsi che il sistema sia scollegato dall'alimentazione, da tutti i collegamenti di comunicazione, reti o linee di modem. Non avviare il sistema senza aver prima messo a posto il coperchio



## Removing the Battery

Perform the following steps to remove the battery:

1. Make sure to power off the VERSA E3100
2. Turn the unit upside down.
3. Unlock the battery and slide it out of its place as the arrow shows in Fig. 1



*Fig. 1 Removing the battery*

## Removing the Memory and Wireless LAN Module

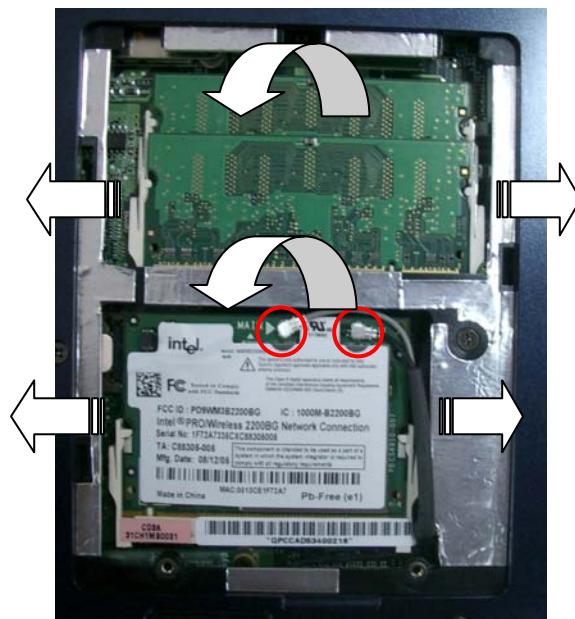
To remove the Memory and Wireless LAN Module, first remove the battery ([see Removing the Battery](#)), then perform the following steps:

1. Release the two screws retaining the memory and wireless LAN module cover.



**Fig. 2** Removing the screws retaining the memory and wireless LAN module slot cover

2. Remove the two wireless LAN cable and unclip the memory and wireless module as shown in Fig. 3



**Fig. 3** Removing the memory and wireless LAN module

## Removing the Hard Disk Drive

To remove the hard disk drive, first remove the battery (see *Removing the Battery*), then perform the following steps:

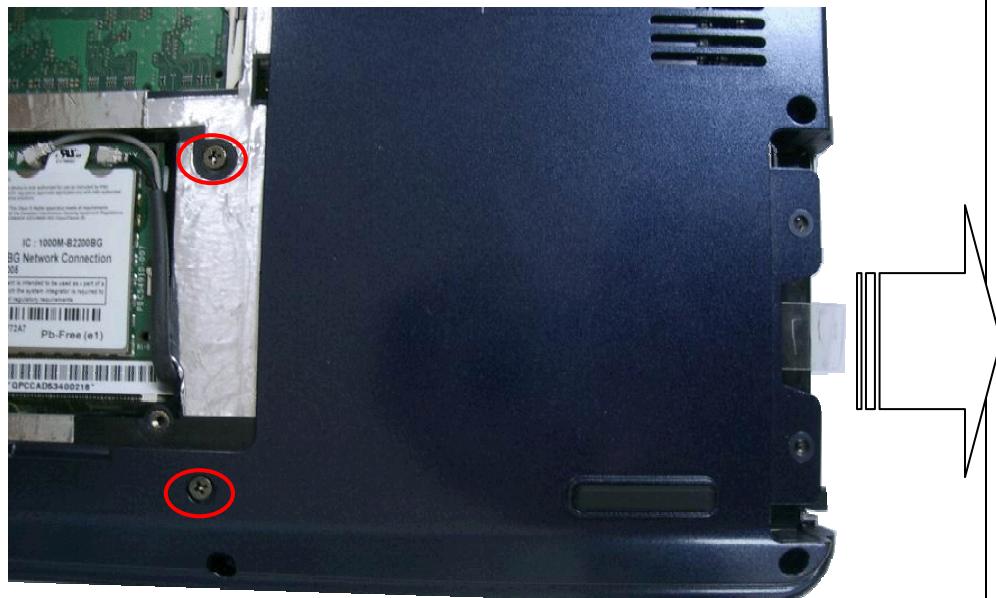
1. Remove the screws as shown in Fig. 4



M2.5X4.5 Black

*Fig. 4* Removing the Hard disk drive cover

2. Release the screws that secure HDD module as shown in Fig. 5 and carefully pull the HDD module out from the base unit.



M2.5X6.5 Black

*Fig. 5* Screw retaining the HDD module

## Removing the Optical Disk Drive

To remove the ODD, first remove the battery ([see Removing the Battery](#)) then perform the following steps:

1. Remove the screws retaining the optical drive as shown in Fig. 6



*Fig. 6* Releasing the optical drive

2. Eject the optical drive using pin as shown in Fig. 7



*Fig. 7* Ejecting the optical drive

3. Pull the ODD module out from the base unit as shown in Fig. 8



**Fig. 8** Pulling the optical drive out from the base unit

## Removing the Keyboard

To remove the Keyboard, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Unscrew the keyboard cover from the rear of the system as shown in Fig. 9



*Fig. 9 Releasing the keyboard cover*

2. Lift up the keyboard cover carefully as shown in Fig. 10



*Fig. 10 Lifting up the Keyboard Cover*

3. Unscrew the two keyboard screws as shown in Fig. 11



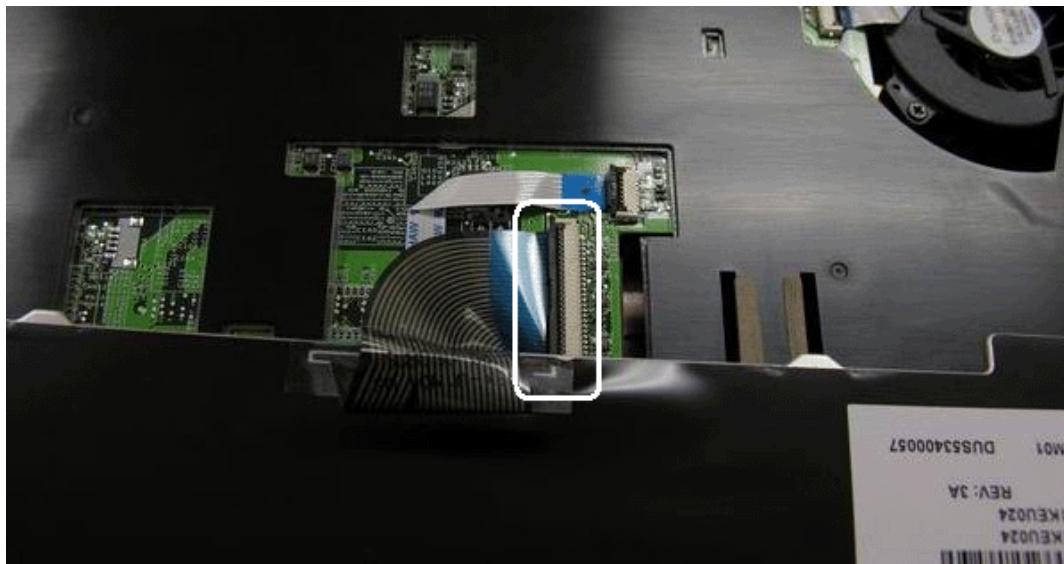
*Fig. 11 Unscrewing the two screws on the keyboard*

4. Turn the system over, remove another screw as shown in Fig. 12



**Fig. 12** Removing the screw at the bottom of the notebook

5. Lift up the keyboard and disconnect it from the base system as shown in Fig. 13



**Fig. 13** Removing the keyboard flex cable

## Removing the LCD Module

To remove the LCD Module first remove the battery (see [Removing the Battery](#)) and remove the Keyboard (see [Removing the Keyboard](#)) then perform the following steps:

1. Turn the system over and slowly push the wireless LAN cable as shown in Fig. 14



*Fig. 14 Pushing the Wireless LAN cable to the front of the system*

2. Turn the notebook back,

- a) remove the two tape
- b) disconnect the LCD cable from the connector
- c) unscrew the 4 screws

all these steps is as shown on Fig. 15



*Fig. 15 Steps to remove LCD Module*

3. Gentle removes the LCD module.

## Removing the LCD Panel

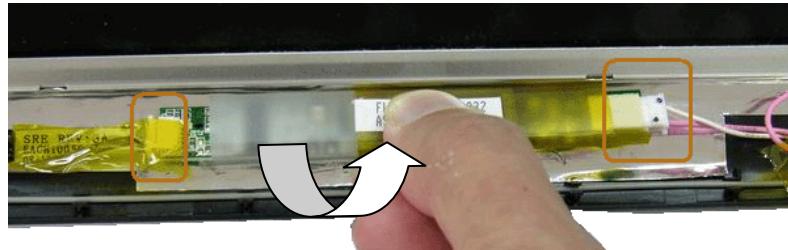
To remove the LCD panel, first remove the LCD module (see *Removing the LCD Module*), then perform the following steps:

1. Use a pin to remove the rubber cover on the LCD module as shown in Fig. 16
2. Remove all screws as shown in Fig. 16 and carefully remove the LCD cover.



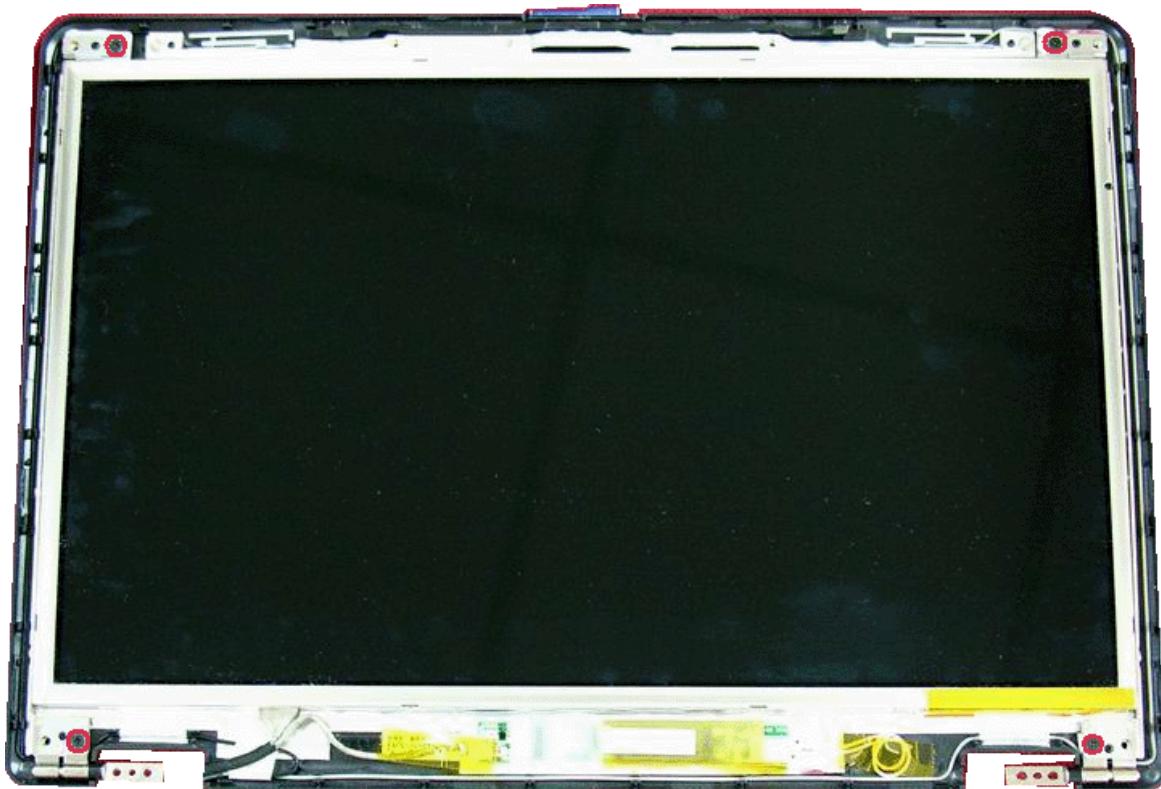
**Fig. 16** Removing the rubber covers & screws on the LCD Module

3. Remove the cables attached to the inverter board and slowly remove the inverter board as shown on Fig 17. (The Inverter Board is still on the LCD back cover using double sided tape)



**Fig. 17** Removing the two cables and slowly pull up the inverter board

4. To remove the LCD, remove the 4 screws as shown in Fig. 18

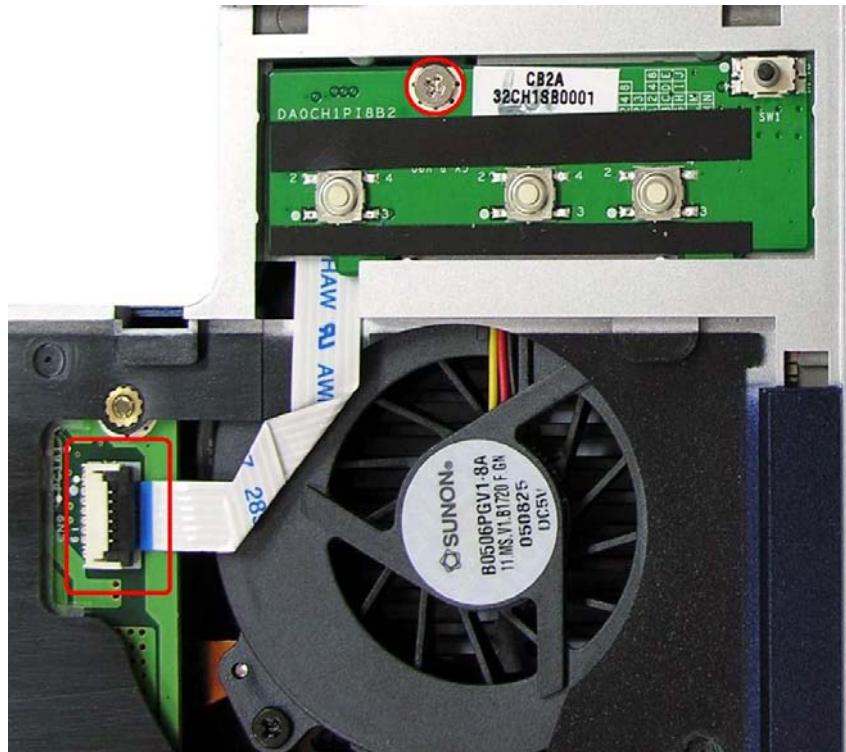


*Fig. 18 Removing the LCD panel*

## Removing the Switch Board Module

To remove the Switch Board Module first remove the battery (see [Removing the Battery](#)) and remove the Keyboard (see [Removing the Keyboard](#)) then perform the following steps:

1. Unscrew the screw on the switch board and detached the flex cable as shown on Fig 19.



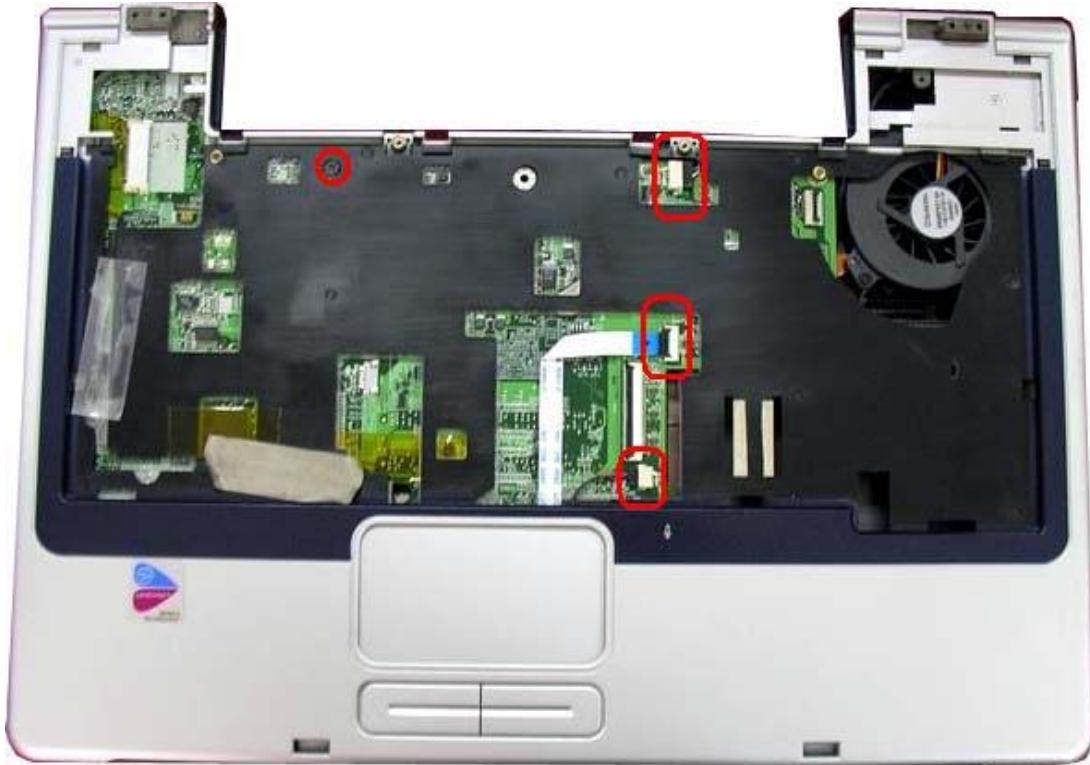
M2X4 Silver

**Fig. 19** Uninstalling the switch board

## Removing the Top Cover Assembly

To remove the Top Cover Assembly first remove the battery (see [Removing the Battery](#)), remove the Keyboard (see [Removing the Keyboard](#)) and remove the LCD module ( See [Removing LCD module](#)) then perform the following steps:

1. Remove a screw and the three cables as shown on Fig 20.



**Fig. 20** Removing a screw and 3 cables

2. Turn the system over and remove all the 14 screws as shown on Fig 21



**Fig. 21** Remove all the 14 screws

3. Turn the system back; slowly remove the top cover assembly as shown in Fig 22.

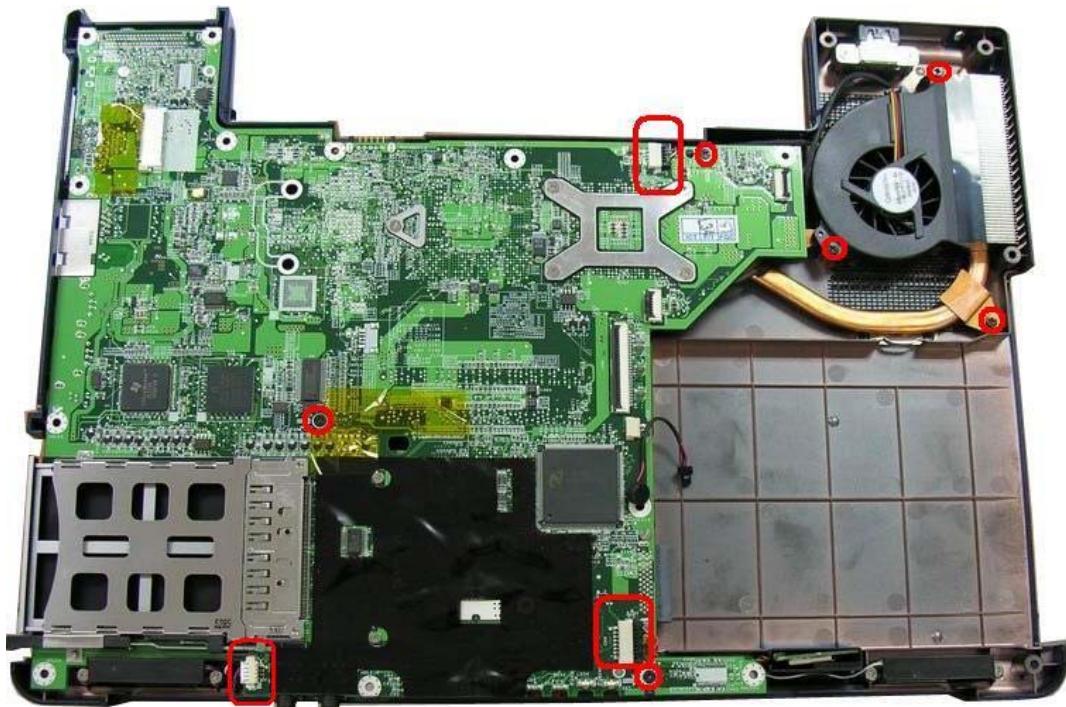


**Fig. 22** Removing the screws retaining the Heat Plate

## Removing the Main Board

To remove the Main Board, first remove the Top Cover Assembly (see [Removing Top Cover Assembly](#)) then perform the following steps:

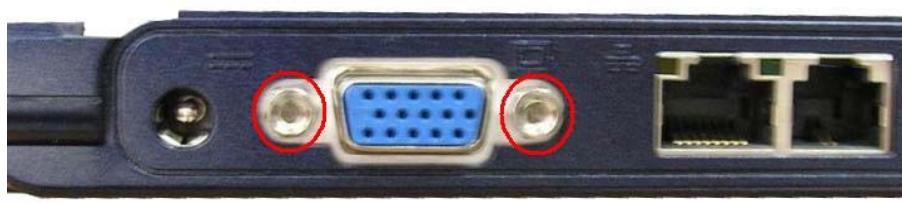
1. Remove the 6 screws and detached the three connectors as shown on Fig 23



M2.5X4.5 Black

*Fig. 23 Removing screws and the connectors on the main board*

2. Remove the two hex screws from the VGA port as shown in Fig. 24



M2.5X5 Silver

*Fig. 24 Removing the two hex screw*

3. Slowly lift up the main board as shown in Fig. 25



*Fig. 25 Slowly removing the main board*

## Removing the CPU

To remove the CPU first remove the main board ([see Removing Main Board](#)) then perform the following steps:

1. Disconnect Fan connection and remove the CPU Heat sink screws in descending order (5→4→3→2→1), then lift up the CPU heat sink + Fan as shown in Fig. 26.



**Fig. 26** Removing the screws and fan connector

2. Use flat screwdriver to unlock the CPU from the CPU socket and lift up the CPU carefully as shown in Fig 27



**Fig. 27** Removing the CPU

## Removing the MDC Modem

To remove the MDC Modem, first remove the main board ([see Removing Main Board](#)) then perform the following steps:

1. Unscrew the two screws and disconnect the connector as shown on Fig. 28

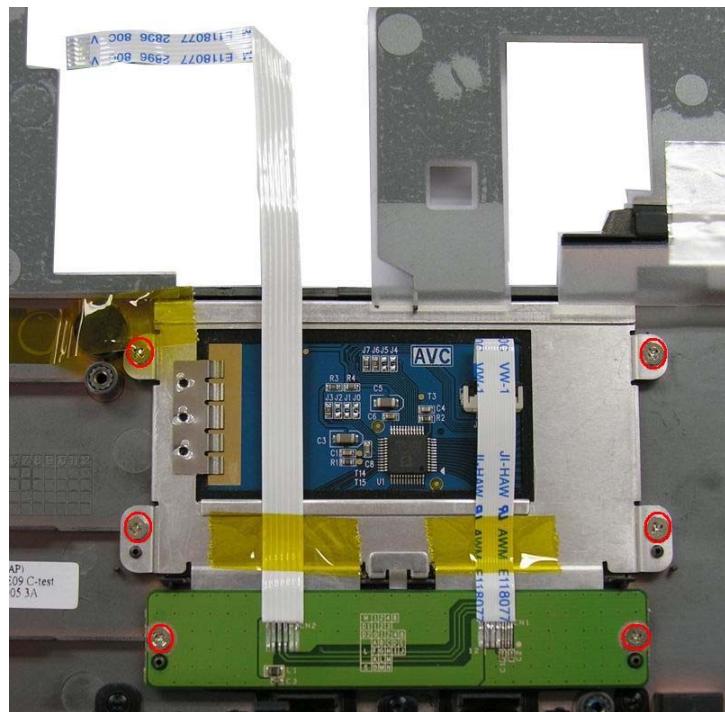


**Fig. 28** Removing MDC modem

## Removing the Touch Pad

To remove the touch pad, first remove the top cover ([see Removing the Top Cover](#)), then perform the following steps:

1. Unscrew the screws on the Top Cover as shown in Fig. 29

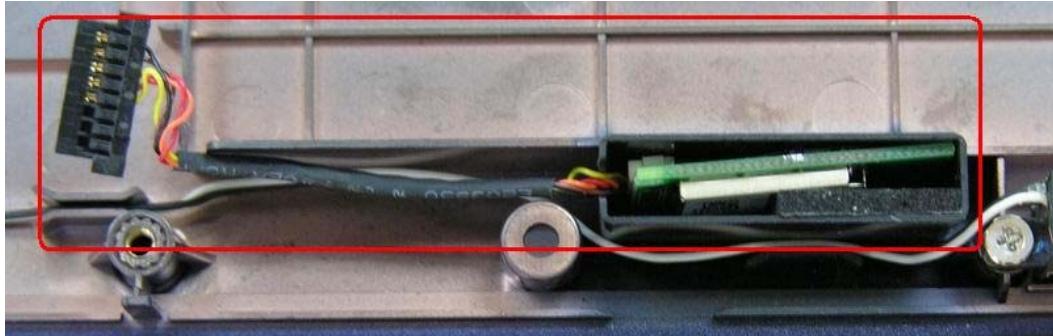


**Fig. 29** Removing the Inverter Board

## Removing the Bluetooth Module

To remove the Bluetooth Module, first remove the main board (see *Removing Main Board*), then perform the following steps:

1. slowly remove the Bluetooth module from the bottom cover as shown in Fig. 30



*Fig. 30 Bluetooth Module*

## Removing the Speaker Assembly

To remove the Speaker Assembly, first remove the Main Board (see *Removing the Main Board*) then perform the following steps:

1. Remove the 4 screws holding Speaker Assembly as shown in Fig. 31



*Fig. 31 Speaker Assembly*

2. Carefully remove the Speaker assembly from Bottom Cover.

## Screws

M2x4Sliver	M2.5X4.5 Black	M2.5x6.5 Black	M2.5x5 Sliver

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